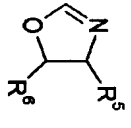
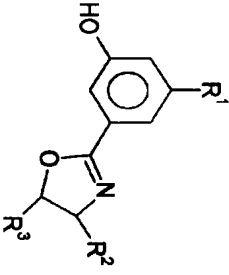


<p>2001-484021/53 A23 BADI 1999.11.09 BASF AG *DE 19953950-A1 1999.11.09 1999-1053950(+1999DE-1053950) (2001.05.10) C08L 77/00, C08K 5/353 Thermoplastic polyamide molding material with improved flow, used for production of fibres, film or moldings, contains a branched homo- or co-polymer obtained from a 2-3'-hydroxyphenyl-oxazoline compound C2001-145301 Addnl. Data: GRUTKE S, GRUBER F, VOIT B, HUBER T</p>	<p>A(5-F1B1, 8-M, 12-E1, 12-S5K, 12-T2, 12-T4)</p> <p>polymerisation of monomers of formula (I); and (C) 0-60 wt% other additives.</p> <div></div> <p>(I) (II)</p> <p>R¹ = H, COOR⁴, OH or a group of formula (II); R², R³ = H, methyl, ethyl, benzyl or phenyl, with the proviso that at least one of these groups is H; R⁴ = H or 1-4C alkyl; R⁵, R⁶ = as for R², R³ An INDEPENDENT CLAIM is also included for molded products</p> <p>DE 19953950-A+</p>
<p>NOVELTY Thermoplastic molding materials containing: (A) 39-99.95 wt% thermoplastic polyamide; (B) 0.05-9 wt% branched homo- or co-polymer obtained by polymerisation of a 2-(3-hydroxyphenyl)-oxazoline compound; and (C) 0-60 wt% other additives.</p>	
<p>DETAILED DESCRIPTION Thermoplastic molding materials containing: (A) 39-99.95 wt% thermoplastic polyamide; (B) 0.05-9 wt% branched homo- or co-polymer obtained by</p>	

<p>obtained from these materials.</p>	
<p><u>USE</u> For the production of fibres, film and molded products (claimed). Preferred applications are in electrical products, electronics and motor vehicles.</p>	
<p><u>ADVANTAGE</u> The addition of branched polymers derived from 2-(3-hydroxy-phenyl)-oxazoline compounds gives polyamide-based molding materials with good flow properties combined with good mechanical properties and good melt- and processing-stability.</p>	<p>21600 and Mw = 51000 with a mol. wt. distribution of 2.3, a glass transition point of 175 °C and an inherent viscosity (DMF; 30 °C) of 0.119 dl/g. Polyamide 6 with equal numbers of acid and amino end groups (B56) was compounded for 5 minutes at 250 °C with 10 wt% P2. The product (B56-P2-10) showed a melting point of 221.0 (222.6) °C, a heat of fusion of 67.5 (74.2) J/g, a crystallisation onset temperature of 190.8 (192.7) °C, a heat of crystallisation of -65.0 (-74.9) J/g, a glass transition point of 73 (52-54) °C, a heat capacity of 0.22 (0.12) J/gK, a complex viscosity of 412 (845) at 250 °C and 1 rad/s, a solution viscosity (0.5 % in sulfuric acid at 25/ °C) of 152 (174) and a tensile modulus (press-molded at 240 °C) of 1.99 (1.92) GPa. Values in brackets are for the unmodified polyamide 6.</p>
<p><u>SPECIFIC COMPOUNDS</u> (A) is polyamide 6.</p>	<p><u>DEFINITIONS</u> Preferred Definitions: R¹ = OH; R² = R³ = H.</p>
<p><u>EXAMPLE</u> 2-(3,5-dihydroxyphenyl)-oxazoline (3.3 g) was polymerized by heating the melt for 1.5 hours at 220 °C and then working up by dissolution in dimethyl sulfoxide (5 ml) followed by precipitation with water or methanol. The product (P2; 2.8 g; 84%) showed a degree of branching of 59% (by ¹H-NMR analysis), mol. wts. (by GPC) of Mn =</p>	<p><u>TECHNOLOGY FOCUS</u> Polymers - Preferred Components: Component (A) shows a COOH to NH₂ end group ratio of more than 1. Component (B) has a degree of branching of at least 10% and a number-average mol. wt. (Mn) of at least 5000.</p>

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